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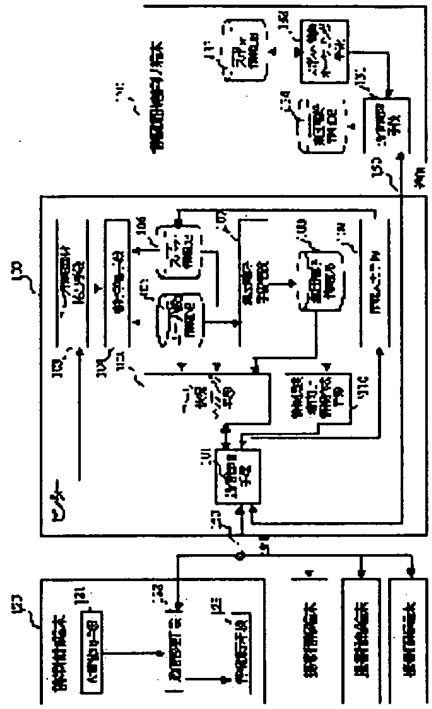
(54) SYSTEM AND METHOD FOR PROVIDING INFORMATION

(57)Abstract:



PROBLEM TO BE SOLVED: To provide a system for providing appropriate information even when a user takes an action pattern different from his/her ordinary action pattern.

SOLUTION: Spot information consisting of position information and explanation contents is stored in a spot information database in a center. Taste information on every user is stored in a taste information database. Taste information on every user group is stored in a group taste information database in the center. When the center extracts the present time and the current position of each user from received data from the user, the center selects spot information on the basis of the present time of the user, the current position, the taste information acquired from the user taste information database according to his/her user ID and the taste information of the user group acquired the group taste information database and transmits the selected spot information to the portable information terminal of the user.

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CLAIMS

[Claim(s)]
[Claim 1] It is a system to offer information equipped with the Personal Digital Assistant, the pin center,large, and the terminal for information providers which were connected by the communication line. Said Personal Digital Assistant Acquire the location of the Personal Digital Assistant, and manage the user ID which specifies the information and the user of the time of day which measured the location management tool to manage, and said positional information and said positional information as transmit data, and it transmits to said pin center,large. A communication management means to receive from the data from a pin center,large, and an information presentation means to show the data received from said pin center,large are included. Said pin center,large Said Personal Digital Assistant, the terminal for said information providers, and a communication management means to transmit and receive data, A User Information material extract means to extract and save each user's current time, and the current position from the received data from said user, The spot information database which stored spot information which consists of positional information and the contents of explanation, such as a restaurant and a tourist resort, The information stored with said User Information material extract means, and a taste study means to learn said user's taste from said spot information database, The user taste information database which stored the taste information for every user which said taste study means learned and generated, An ensemble taste study means to learn a user ensemble's taste information using the information stored in said user taste information database, The ensemble taste information database which stored the taste information for every user ensemble which said ensemble taste study means learned and generated, Said user's current time, and the current position and taste information acquired from said user taste information database by said user ID, Spot information is chosen based on a user ensemble's taste information acquired from said ensemble taste information database. A user situation matching means to require the selected spot information as transmitting to this user's Personal Digital Assistant to said communication management means, The information creation means for the information providers who give a demand to said communication management means so that the target user ensemble's taste information may be retrieved in said ensemble taste information database for every information provider and a result may be transmitted to said terminal for information providers, An information input means to input said spot information from said terminal for information providers into a spot information database is included. Said terminal for information providers It uses, in case an information provider creates the contents of spot information, a communication management means to transmit and receive said pin center,large and data, and. A spot information authoring means to require a communication management means to transmit spot information to said pin center,large after creating, The spot information database which stores said spot information created with said spot information authoring means, The system to offer information for the mobile users characterized by including the ensemble taste information database which receives said ensemble taste information from said pin center,large which said communication management means received.
[Claim 2] Said spot information database is a system to offer information for mobile users according to claim 1 characterized by including advertising information as spot information.

[Claim 3] Said communication line is a system to offer information for mobile users according to claim 1 characterized by using a cellular phone.
[Claim 4] It is the information offer approach in a system to offer information equipped with a user's Personal Digital Assistant connected by the communication line, a pin center,large, and the terminal for information providers. The step which learns said user's taste and is stored in a user taste information database from the spot information database which stored spot information which consists of positional information and the contents of explanation, such as a restaurant and a tourist resort, The step which extracts and saves each user's current time, and the current position from the received data from a user, The step which learns a user ensemble's taste information using the information stored in said user taste information database, and is stored in an ensemble taste information database, Said user's current time, the current position, and the taste information acquired from said user taste information database by said user ID, The step which chooses spot information based on a user ensemble's taste information acquired from said ensemble taste information database, and requires the selected spot information as transmitting to said Personal Digital Assistant of this user, The step which advances [retrieving the target user ensemble's taste information in said ensemble taste information database for every information provider, and transmitting a result to said terminal for information providers, and] a demand, The step which inputs said spot information from said terminal for information providers into a spot information database, The step which creates the contents of spot information, stores in a spot information database, and requires the created spot information as transmitting to said pin center,large, The information offer approach for the mobile users characterized by including the step which receives ensemble taste information and stores the received data in an ensemble taste information database.
[Claim 5] Said spot information database is the information offer approach for mobile users according to claim 4 characterized by including advertising information as spot information.
[Claim 6] Said communication line is the information offer approach for mobile users according to claim 4 characterized by using a cellular phone.
[Claim 7] A communication management means to be a pin center,large in a system to offer information equipped with the Personal Digital Assistant, the pin center,large, and the terminal for information providers which were connected by the communication line, and to transmit and receive said Personal Digital Assistant, the terminal for said information providers, and data, A User Information material extract means to extract and save each user's current time, and the current position from the received data from said user, The spot information database which stored spot information which consists of positional information and the contents of explanation, such as a restaurant and a tourist resort, The information stored with said User Information material extract means, and a taste study means to learn said user's taste from said spot information database, The user taste information database which stored the taste information for every user which said taste study means learned and generated, An ensemble taste study means to learn a user ensemble's taste information using the information stored in said user taste information database, The ensemble taste information database which stored the taste information for every user ensemble which said ensemble taste study means learned and generated, Said user's current time, and the current position and taste information acquired from said user taste information database by said user ID, Spot information is chosen based on a user ensemble's taste information acquired from said ensemble taste information database. A user situation matching means to require the selected spot information as transmitting to this user's Personal Digital Assistant to said communication management means, The information creation means for the information providers who give a demand to said communication management means so that the target user ensemble's taste information may be retrieved in said ensemble taste information database for every information provider and a result may be transmitted to said terminal for information providers, The pin center,large in a system to offer information including an information input means to input said spot information from said terminal for information providers into a spot information database.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] Especially this invention relates to the system to offer information and the information offer approach for the mobile users who offer the trend information which learned not only each user's taste but a user ensemble's taste to the user who carries a Personal Digital Assistant about the system to offer information and the information offer approach for users, learned further, and was acquired in consideration of each user's current time, the current position, and taste.
[0002]
[Description of the Prior Art] Previously, the applicant for this patent used the broadcast for communications services by Japanese Patent Application No. No. 312487 [11 to], and indicated per [which receives the advertisement in consideration of the positional information of current time and a user, and a user's taste information with a personal digital assistant] system. Moreover, the system which acquires an individual taste automatically is indicated from the individual behavior pattern by Japanese Patent Application No. No. 290379 [11 to]. In case service using this system is enjoyed, a user carries the personal digital assistant which offered the device which carries out GPS reference-by-location profit. As for the personal digital assistant, it is possible for a user to recognize the store which goes frequently, and the point, and it can extract a user's taste using the store and attribute information on the point.
[0003] Moreover, the coordination filtering technique is known as structure for collecting individual information, performing grouping and performing the common proposal for every group. For example, using the coordination filtering technique, from the past hysteresis, a customer's taste and needs are learned and the technique (http://www.netperceptions.com/) of performing One-to-One marketing by which the PASONA rise was carried out more is offered.
[0004]
[Problem(s) to be Solved by the Invention] The system (Japanese Patent Application No. 11-312487, Japanese Patent Application No. 11-290379) mentioned above offers the information reflecting the taste of the user who learned in the area which the user had carried out. If it puts in another way, these systems can offer only the information only in consideration of the taste information learned with user's individual's usual behavior pattern. For this reason, in the area which the user visited for the first time, even if it offers the reflected information when information reflecting that user's taste information cannot be offered, the case of being meaningless may arise.
[0005] For example, in order that a certain user may go in Tokyo to an Italian restaurant frequently, the case where what "the Italian cuisine is liked for" as the user's taste information is learned, and the user travels Hakone is considered. In this case, a system provides that user with the information on the Italian restaurant in Hakone. However, when the user also has taste of liking the local culinary specialties of the land at a tourist resort, a user thinks that he wants the information on local culinary specialties. However, with the technique expressed above, since the store of the local culinary specialties which a user has not performed is not learned, a user is not provided with the information.

[0006] Then, the purpose of this invention is by it not only learning a user individual's taste, but solving the above-mentioned problem, learning a user ensemble's taste and offering trend information in consideration of each user's current time, the current position, and taste to the user who carries a Personal Digital Assistant, based on a collective taste to realize the technique in which the effective information for a user can be offered. Moreover, since an information provider is provided with the target user ensemble's ensemble taste information, an information provider becomes possible [managing customer information], and can utilize as marketing information. When the information provider offers advertising information, in order to create an effective advertisement, collective taste information can be used.

[0007]

[Means for Solving the Problem] The 1st this invention is equipped with the Personal Digital Assistant which communicates by the radio circuit, a pin center,large, and the terminal for information providers in a system to offer information. A Personal Digital Assistant Acquire the location of the Personal Digital Assistant, and manage ID which specifies the information and the user of the time of day which measured the location management tool to manage, and said positional information and said positional information as transmit data, and it transmits to said pin center,large. A communication management means to receive from the data from a pin center,large, and an information presentation means to show the data received from said pin center,large are included. Said pin center,large Said Personal Digital Assistant, the terminal for said information providers, and a communication management means to transmit and receive data, A User Information material extract means to extract and save each user's current time, and the current position from the received data from said user, The spot information database which stored spot information which consists of positional information and the contents of explanation, such as a restaurant and a tourist resort, The information stored with said User Information material extract means, and a taste study means to learn said user's taste from said spot information database, The user taste information database which stored the taste information for every user which said taste study means learned and generated, An ensemble taste study means to learn a user ensemble's taste information using the information stored in said user taste information database, The ensemble taste information database which stored the taste information for every user ensemble which said ensemble taste study means learned and generated, Said user's current time, the current position, and the taste information acquired from said user taste information database by said user ID, Spot information is chosen based on a user ensemble's taste information acquired from said ensemble taste information database. A user situation matching means to require the selected spot information as transmitting to this user's Personal Digital Assistant to said communication management means, The information creation means for the information providers who give a demand to said communication management means so that the target user ensemble's taste information may be retrieved in said ensemble taste information database for every information provider and a result may be transmitted to said terminal for information providers, An information input means to input said spot information from said terminal for information providers into a spot information database is included. Said terminal for information providers It uses, in case an information provider creates the contents of spot information, a communication management means to transmit and receive said pin center,large and data, and. A spot information authoring means to require a communication management means to transmit spot information to said pin center,large after creating, Let it be a summary to include the spot information database which stores said spot information created with said spot information authoring means, and the ensemble taste information database which receives said ensemble taste information from said pin center,large which said communication management means received.

[0008] Since an individual user's taste not only learns, but it can learn a user ensemble's taste and trend information can be offered in consideration of each user's current time, the current position, and taste by this to the user who carries a Personal Digital Assistant based on a collective taste, this invention can offer the effective information for a user. Moreover, since this invention offers the target user ensemble's ensemble taste information to an information provider, an information provider can create information effectively. For example, it can make it

possible to manage customer information and ensemble taste information can be utilized as marketing information. Moreover, when the information provider offers advertising information, in order to create an effective advertisement, collective taste information can be used.
[0009] Moreover, in one deformation of the 1st this invention, a spot information database includes advertising information as spot information. Thereby, it enables a pin center,large to obtain advertising revenue. Moreover, in another deformation of the 1st this invention, that for which said radio circuit used the cellular phone is adopted. Thereby, the existing telecom infrastructure can be used.
[0010] Moreover, the step which the 2nd this invention acquires the location of a Personal Digital Assistant in the information offer approach for mobile users, and is managed, The step which manages ID which specifies the information and the user of the time of day which measured said positional information and said positional information as transmit data, and is transmitted to a pin center,large by the radio circuit, From the step which presents the data received from said pin center,large, and the received data from a user Extract each user's current time, and the current position, and from the spot information database which stored spot information which consists of the step and positional information to save, and the contents of explanation, such as a restaurant and a tourist resort The step which learns said user's taste and is stored in a user taste information database, The step which learns a user ensemble's taste information using the information stored in said user taste information database, and is stored in an ensemble taste information database, Said user's current time, and the current position and taste information acquired from said user taste information database by said user ID, The step which chooses spot information based on a user ensemble's taste information acquired from said ensemble taste information database, and requires the selected spot information as transmitting to said Personal Digital Assistant of this user, The step which advances [retrieving the target user ensemble's taste information in said ensemble taste information database for every information provider, and transmitting a result to said terminal for information providers, and] a demand, The step which inputs said spot information from said terminal for information providers into a spot information database, The contents of spot information are created, and it stores in a spot information database, and let it be a summary to include the step which requires the created spot information as transmitting to said pin center,large, and the step which receives ensemble taste information and stores the received data in an ensemble taste information database.
[0011] Thereby, since this invention can learn a user ensemble's taste and an individual user's taste not only learns, but it can offer trend information in consideration of each user's current time, the current position, and taste to the user who carries a Personal Digital Assistant based on a collective taste, it can offer the effective information for a user.
[0012] Moreover, since the target user ensemble's ensemble taste information is offered to an information provider, an information provider can create information effectively. For example, it can make it possible to manage customer information and ensemble taste information can be utilized as marketing information. Moreover, when the information provider offers advertising information, in order to create an effective advertisement, collective taste information can be used.
[0013] In one deformation of the 2nd this invention, a spot information database includes advertising information as spot information. Thereby, it enables a pin center,large to obtain advertising revenue. Moreover, in another deformation of the 2nd this invention, that for which the radio circuit used the cellular phone is adopted. Thereby, the existing telecom infrastructure can be used.
[0014]
[Embodiment of the Invention] Next, the system to offer information of this invention and the gestalt of operation of the information offer approach are explained with reference to a drawing.
[0015] Reference of drawing 1 constitutes the system to offer information of this invention from a radio circuit 150 which connects these with a pin center,large 100, the information offer terminal 120, and the terminal 130 for information providers mutually.
[0016] Personal Digital Assistant 120 is an information processor which users, such as Notes PC

and PDA (Personal Digital Assistant), carry. Personal Digital Assistant 120 consists of the location management tool 121, a communication management means 122, and an information presentation means 123.

[0017] The location management tool 121 acquires the location of Personal Digital Assistant 120, and manages positional information. The location management tool 121 acquires positional information using GPS (Global Positioning System) etc. The communication management means 122 transmits the positional information transmitted from the location management tool 121, measurement time of day, and user ID to a pin center,large 100. For example, the data to transmit have DS like drawing 2 . In addition, of course, it is not necessary performing time-of-day measurement in the pin center,large, then to transmit measurement time of day.

[0018] The information presentation means 123 shows a user the data transmitted from the pin center,large 100. For example, the data of DS like drawing 3 are transmitted. For example, in drawing 3 , if provided information 304 is HTML document data, the information presentation means 123 is a WWW browser. Moreover, for example, in drawing 3 , if provided information 304 is voice data, the information presentation means 123 is a voice regenerative apparatus.

[0019] A pin center,large 100 includes means of communications 101, the user situation matching means 102, the User Information material extract means 103, the taste study means 104, the user taste information DB105, the spot information DB106, the ensemble taste study means 107, the ensemble taste information DB108, the information input means 109, and the means 110 for information providers.

[0020] The communication management means 101 transmits the information (drawing 2) received from a user's Personal Digital Assistant 120 to the user situation matching means 102. Moreover, spot information (drawing 3) is transmitted to Personal Digital Assistant 120. The spot information furthermore transmitted from the terminal 130 for information providers is stored in the spot information DB106, and ensemble taste information is transmitted to the terminal 130 for information providers.

[0021] The user situation matching means 102 acquires the spot information suitable for a user's situation (time amount, a location, taste) from the spot information DB106 based on the data (the user ID 200 of drawing 2 , positional information 201, measurement time of day 202) transmitted from the information personal digital assistant 120. The taste information taken into consideration in the case of matching is the information which unified two, the taste information of this user that extracted from the user taste information DB105, and a user ensemble's taste information that this user that extracted from the ensemble taste information DB belongs.

[0022] From the communication management means 101, the User Information material extract means 103 transmits the data (drawing 2) of Personal Digital Assistant 120 to reception, and transmits those data to the taste study means 104.

[0023] From the data transmitted from the User Information material extract means 103, the taste study means 104 extracts a user's behavior pattern, and learns a user's taste. For example, the taste study means 104 specifies the spot at which the user stayed from the positional information 201 and the measurement time of day 202 of drawing 2 . The spot information DB106 is retrieved and the information on the spot (drawing 3) is searched for. A user's taste information is extracted based on the attribute information 302 showing the attribute of the spot information on a retrieval result. The taste information of the user who corresponds by user ID is accessed, and the taste information of the user within the user taste information DB105 is updated.

[0024] The data with which a user's taste information DB105 made the group taste information of user ID 200 and its user are stored. For example, a user's taste information is expressed by the keyword list showing a user's taste. Moreover, weight is given to the keyword which expresses a user's taste, for example, and taste information is expressed by the keyword vector (the list of keywords, and group of weight). Furthermore, the keyword vector which expresses a user's taste, for example is managed in the group of a hour entry and the information on a location. For example, both a user's behavior patterns computed with the taste study means 104 are also stored.

[0025] Spot information as shows the spot information DB106 to drawing 3 is stored.

[0026] The ensemble taste study means 107 acquires a user ensemble's taste information from the user taste information DB105, and learns a collective taste. For example, the grouping of the user to whom profile information, taste, and profile information are similar is performed, and an ensemble is made. A collective taste is extracted from the behavior pattern of the user who belongs, or each user's taste information for every ensemble. Collective taste information is stored in the ensemble taste information DB108.

[0027] A user ensemble's taste information is stored in the ensemble taste information DB108. For example, the taste information acquired from the taste information which unified the list of the information showing the taste of the ensembles, such as a keyword list, and the user ID 200 belonging to an ensemble and the taste of the user belonging to the ensemble, or a behavior pattern is stored for every user ensemble.

[0028] The information creation means 110 for information providers accesses the ensemble taste information DB108, extracts required ensemble taste information for every information provider, and it requires it of the communication management means 101 so that it may transmit to each information provider.

[0029] The information input means 109 stores in the spot information DB106 the contents of the spot information transmitted from the terminal 130 for information providers.

[0030] The terminal 130 for information providers includes the communication management means 131, the spot information authoring means 132, the spot information DB133, and the ensemble taste information DB134.

[0031] The spot information authoring means 132 is a means used in case an information provider creates the contents of spot information, and the contents after creation are stored in the spot information DB133.

[0032] Data with DS as shows the spot information DB133 to drawing 3 are stored.

[0033] The communication management means 131 manages the communication link with a pin center,large 100. The spot information which the information provider created is transmitted to a pin center,large 100, and the ensemble taste information which the pin center,large 100 learned and acquired is received. The received ensemble taste information is stored in the ensemble taste information DB134.

[0034] The taste information of the user ensemble who mainly receives the contents to which the information provider created the ensemble taste information DB134 is stored. For example, an information provider is an advertiser, and when the created spot information is an advertisement, the customer information on the goods which should be advertised is stored.

[0035] The radio circuit 150 connects between Personal Digital Assistant 120, a pin center,large 100, and the terminal 130 for information providers. For example, it is possible to use a cellular phone and the Internet.

[0036] Next, actuation of this invention is explained. First, actuation of Personal Digital Assistant 120 is explained with reference to drawing 4 and 5. In Personal Digital Assistant 120, if it becomes the timing which transmits positional information (drawing 4 step B1), the location management tool 121 will extract positional information, and will record measurement time of day. The communication management means 122 transmits ID of the user who is carrying Personal Digital Assistant 120 registered, and the positional information and measurement time of day which were received from the location management tool 121 to a pin center,large 100 (drawing 4 step B-2).

[0037] The communication management means' 122 reception of the spot information (drawing 3) transmitted from the pin center,large 100 presents the spot information received to a user's Personal Digital Assistant (drawing 5 step B11). (drawing 5 step B10) For example, in drawing 3 , if provided information 304 is HTML document data, the information presentation means 123 is a WWW browser. Moreover, if provided information 304 is voice data, for example in drawing 3 , the information presentation means 123 is a regenerative apparatus.

[0038] Next, actuation of a pin center,large 100 is explained with reference to drawing 6 - drawing 8 .

[0039] In the pin center,large 100, means of communications 101 receives the data (drawing 2) showing a user's situation from a user's information personal digital assistant 120 (drawing 6 step A1). Means of communications 101 transmits the received data to the User Information material extract means 103 and the user situation matching means 102 (drawing 6 step A2). For example, the User Information material extract means 103 is equipped with the buffer which saves the data (drawing 3) of the received user situation.

[0040] With the user situation matching means 102, it investigates whether it is spot information presentation timing to the user who transmitted the data (drawing 2) of a user situation (drawing 6 step A4). For example, the information on each user's spot information presentation timing is memorized within the user situation matching means 102. Moreover, for example, the information on each user's spot information presentation timing is stored in the user taste information DB, is retrieved by user ID, and makes it possible to extract.

[0041] When it is spot information timing (drawing 4 step A4), the spot information on the spot information DB106 (drawing 3) is retrieved [the measurement time of day 202] for the value of time amount, and a user's positional information 201 a condition [the value of a location, and the value of taste]. The value of taste is data which unified the taste information of this user that accessed the user taste information DB and searched for it by user ID 200, and two taste information of a user ensemble extracted from the ensemble taste information DB108 that this user belonged in that case.

[0042] For example, filtering according the spot information within the spot information DB to time amount, filtering by the location, and filtering by taste are performed, and spot information is sorted from the sum total of the score computed by three filtering. And this user will be provided with the spot information on the rank of a high order.

[0043] For example, filtering by time amount is extracted only to the spot information only on the restaurant which does business at the present time of day, and the spot suitable for sightseeing.

[0044] For example, in filtering by the location, although it is near from this user location, spot information is calculated to make it rank it as a high order.

[0045] For example, the taste information of the user within the user taste information DB105 and the taste information of the ensemble within the ensemble taste information DB are expressed by the keyword vector which shows taste, and the case where the attribute information 302 on spot information is also expressed by coincidence by the keyword vector again is considered. The similarity of the keyword vector showing this user's taste and the keyword vector of spot information is calculated. The similarity of the keyword vector which similarly expresses the taste of the user ensemble to whom this user belongs, and the keyword vector of spot information is calculated. Two computed similarity is unified, the list of spot information is sorted in order of what has a high score, and it considers as the spot information which shows a user only the thing of a high order.

[0046] For example, in case the similarity of the comparison result of a user's taste information and spot information and the similarity of the comparison result of collective taste information and spot information are unified, it is possible to decide whenever [two effect / of a count result] beforehand, and to place it. What is necessary is for it to be large in whenever [effect / of the similarity from a user's taste information and spot information] to set weight to a user's taste, and just to enlarge whenever [effect / of the similarity from collective taste information and spot information] to set weight to a collective taste.

[0047] For example, when a user visits a certain area for the first time, there is no information from taste study of the user about the area. Therefore, on the whole, the similarity of the comparison result of the taste information on a user independent and spot information becomes low. In that case, whenever [effect / of the similarity computed from collective taste information] is enlarged. When it is in the area which it visits for the first time by that cause, it becomes possible to offer the information for which are suitable based on the taste of the ensemble to whom this user belongs. When it is below the constant value that has the similarity average computed from the taste information on a user independent as an example of the approach, a certain fixed price increase ****** is considered in whenever [effect / of the similarity computed from collective taste information]. (Drawing 6 step A5)

[0048] The spot information after filtering is transmitted to the user situation matching means 102 to the communication management means 101, and delivery and its information are transmitted to this user's Personal Digital Assistant 120 (drawing 6 step A6).

[0049] Actuation of the taste study in a pin center,large 100 is explained with reference to drawing 7 .

[0050] If the taste study means 104 becomes taste study timing, it will acquire the data (drawing 2) of a user situation saved for a user's information material extract means 103. The taste study means 104 extracts only the data of the same user's situation, and detects the positional information of the spot which can be recognized as stay with a user's behavior pattern (drawing 7 step A11).

[0051] For example, with the taste study means 104, when memorizing the value of the stay qualification time amount X "stay can be presumed if it is made a certain point (GPS LAT LONG + radius r) more than X part" and having passed over X, it is considered that I stayed at the spot. Moreover, suppose that it also has the value of a radius r within the taste study means 104.

[0052] The taste study means 104 retrieves the spot information (drawing 3) applicable to the spot recognized as my having stayed for the spot information DB (drawing 7 step A12).

[0053] The taste study means 104 retrieves this user's taste information for a user's taste information DB105 (drawing 7 step A13).

[0054] the information on the attribute information 302 on spot information, and relevant to taste in the taste study means 104 -- extracting -- a user's taste information -- an addition -- or it creates (drawing 7 step A14).

[0055] For example, when it is the keyword list for which expresses a user's taste by the keyword list, and the attribute information 302 expresses the provided information 304 of spot information, the keyword is added to the keyword list showing a user's taste.

[0056] Moreover, when the keyword which expresses a user's taste, for example is managed with time amount and the information on a location, the keyword list of positional information 201, the measurement time of day 202, and taste is made into a group, and the data is updated.

[0057] The data with which a user's taste information DB105 made the group taste information of user ID 200 and its user are stored. For example, a user's taste information is expressed by the keyword list showing a user's taste. Moreover, weight is given to the keyword which expresses a user's taste, for example, and taste information is expressed by the keyword vector (the list of keywords, and group of weight). Furthermore, the keyword vector which expresses a user's taste, for example is managed in the group of a hour entry and the information on a location.

[0058] The taste study means 104 was updated or stores a user's newly created taste information in the user taste information DB105 (drawing 7 step A15).

[0059] Next, actuation of the ensemble taste study in a pin center,large 100 is described with reference to drawing 8 .

[0060] If the ensemble taste study means 107 becomes ensemble taste study timing (drawing 8 step A20), it loads a user's taste information from the user taste information DB105 (drawing 8 step A21).

[0061] For example, the timing of ensemble taste study is recorded with the ensemble taste study means 107. The ensemble taste study means 107 learns taste information for every user ensemble (drawing 8 step A22).

[0062] For example, from the user taste information DB105, the ensemble taste study ensemble 107 does grouping of a user's ensemble from a user's taste information information, unifies the taste information of the user in an ensemble for every user ensemble of the, and makes the result a study result.

[0063] For example, in the case of time amount and the taste information in consideration of a location, a user ensemble's taste information also unifies [the taste information within the user taste information DB] the taste information of the user in each ensemble in consideration of time amount and a location.

[0064] For example, from the user taste information DB105, when the behavior pattern is stored for every user within the user taste information DB, after carrying out grouping of a user's ensemble from a user's taste information information, the ensemble taste study ensemble 107 extracts a collective taste from the user ensemble's behavior pattern, and makes the result a study result. The ensemble taste study means 107 makes the data of a study result reflect to the ensemble taste study DB108 (drawing 8 step A23).

[0065] A user ensemble's taste information which the ensemble taste study means 107 is a certain timing, and is made into an information provider's object is retrieved (drawing 8 step A24).

[0066] For example, the ensemble taste study means 107 has memorized the data of the candidate user ensemble for every information provider, and the timing of information offer.

[0067] The ensemble taste study means 107 transmits a retrieval result to means of communications 101, and means of communications 101 transmits the target user ensemble's taste information to each information provider (drawing 8 step A25).

[0068] Actuation of the terminal 130 for information providers is explained using drawing 9 and drawing 10 .

[0069] With reference to drawing 9 , actuation of spot information authoring of the terminal 130 for information providers is explained.

[0070] An information provider does authoring of the spot information (drawing 3) using the spot information authoring means 132 (drawing 9 step C1).

[0071] the spot information which the spot information authoring means 132 was created, or was updated -- the spot information 133 -- storing -- or it updates. And new spot information is transmitted to a pin center,large 100 through the communication management means 131 (drawing 9 step C2).

[0072] Next, with reference to drawing 10, the actuation which receives the ensemble taste information on the terminal 130 for information providers is explained.

[0073] The target user [means / 131 / communication management / information provider / a pin center,large 100 to] ensemble's ensemble taste information is received (drawing 10 step C10).

[0074] The communication management means 131 stores the received data in the ensemble taste information DB134 (drawing 10 step C11). An information provider develops future goods with reference to the data stored for the ensemble taste information DB134.

[0075]

[Effect of the Invention] Since an individual user's taste not only learns, but according to this invention it can learn a user ensemble's taste and trend information can be offered in consideration of each user's current time, the current position, and taste to the user who carries a Personal Digital Assistant based on a collective taste as the above was explained, it becomes possible to offer the effective information for a user. Moreover, since an information provider is provided with the target user ensemble's ensemble taste information, it is utilizable for marketing. And when the information with which a user is provided is advertising information, it enables the advertiser who is an information provider for customer information to come to hand.

[Translation done.]

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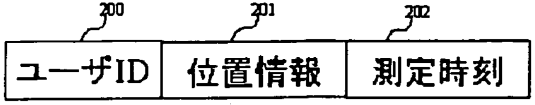
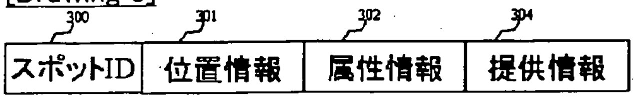
1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

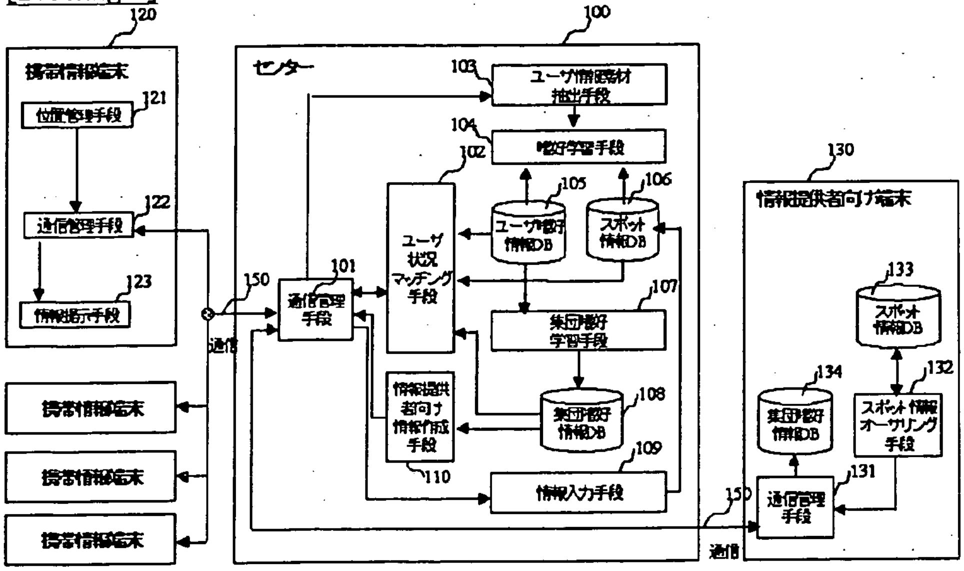
[Drawing 2]


200
201
202
ユーザID
位置情報
測定時刻

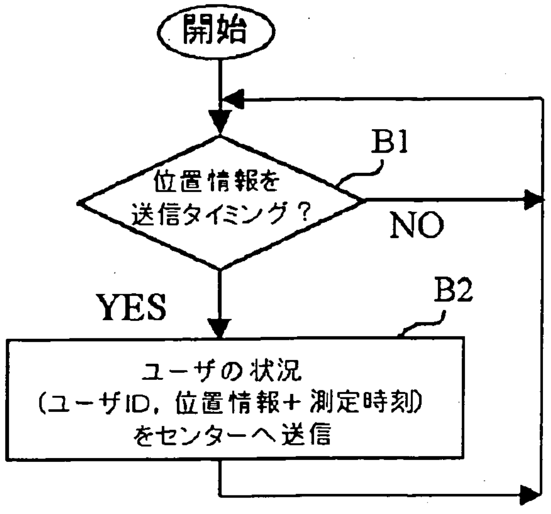
[Drawing 3]


300
301
302
304
スポットID
位置情報
属性情報
提供情報

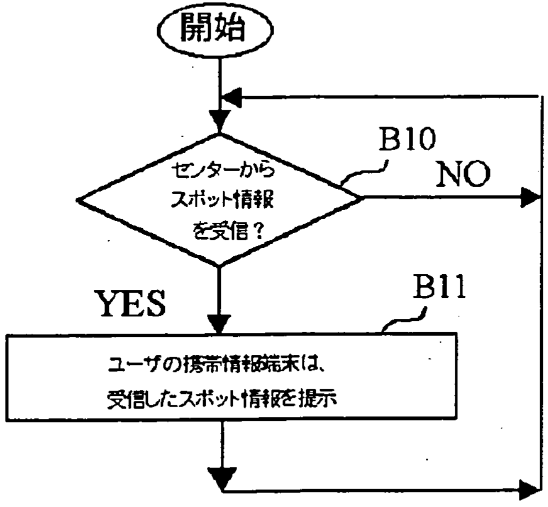
[Drawing 1]


120
携帯情報端末
121
位置管理手段
122
通信管理手段
123
情報提示手段
携帯情報端末
携帯情報端末
携帯情報端末
150
通信
100
センター
101
通信管理手段
102
ユーザ状況マッチング手段
103
ユーザ情報素材抽出手段
104
嗜好学習手段
105
ユーザ嗜好情報DB
106
スポット情報DB
107
集団嗜好学習手段
108
集団嗜好情報DB
109
情報入力手段
110
情報提供者向け情報作成手段
150
通信
130
情報提供者向け端末
131
通信管理手段
132
スポット情報オーサリング手段
133
スポット情報DB
134
集団嗜好情報DB

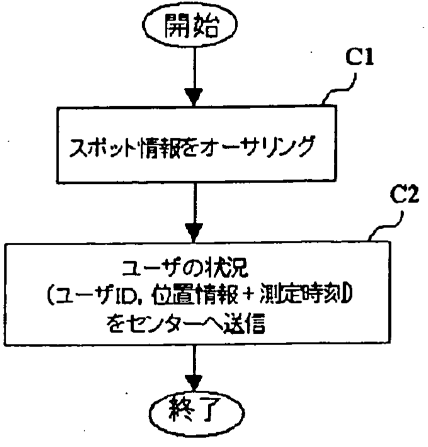
[Drawing 4]


開始
B1
位置情報を送信タイミング？
NO
YES
B2
ユーザの状況
(ユーザID，位置情報＋測定時刻)
をセンターへ送信

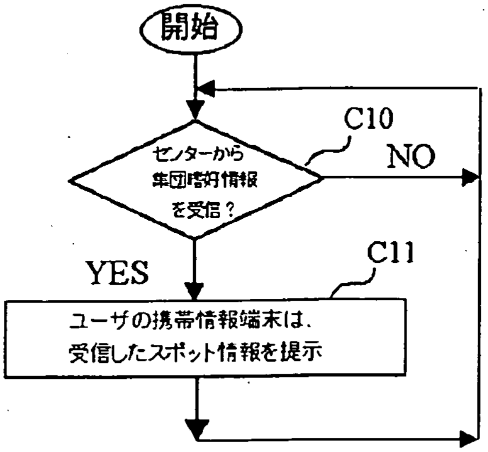
[Drawing 5]


開始
B10
センターから
スポット情報
を受信？
NO
YES
B11
ユーザの携帯情報端末は、
受信したスポット情報を提示

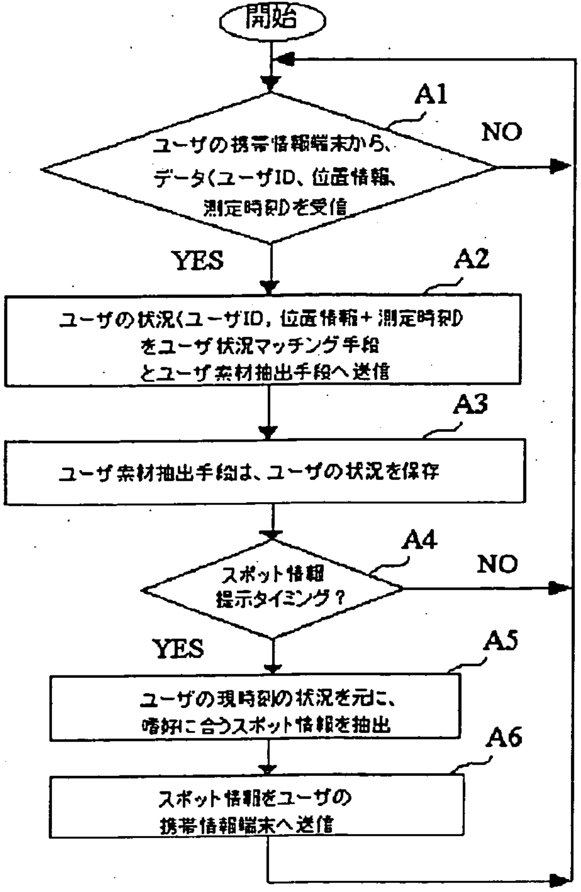
[Drawing 9]


開始
C1
スポット情報をオーサリング
C2
ユーザの状況
(ユーザID，位置情報＋測定時刻)
をセンターへ送信
終了

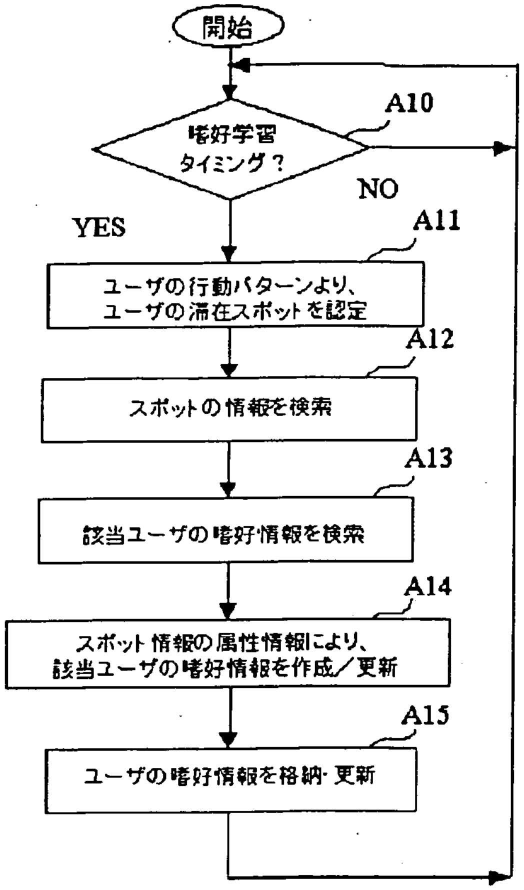
[Drawing 10]


開始
C10
センターから集団嗜好情報を受信？
NO
YES
C11
ユーザの携帯情報端末は、受信したスポット情報を提示

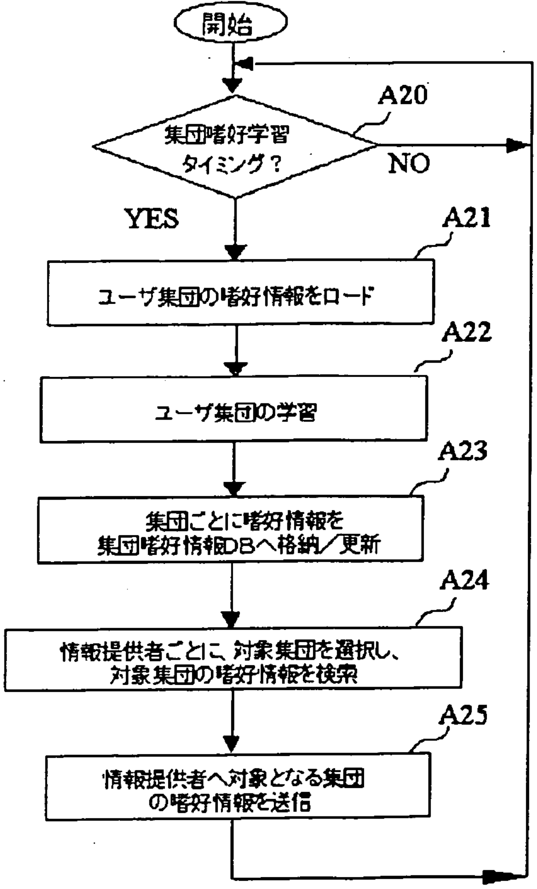
[Drawing 6]


開始
A1
ユーザの携帯情報端末から、データ（ユーザID、位置情報、測定時刻）を受信
NO
YES
A2
ユーザの状況（ユーザID，位置情報＋測定時刻）をユーザ状況マッチング手段とユーザ素材抽出手段へ送信
A3
ユーザ素材抽出手段は、ユーザの状況を保存
A4
スポット情報提示タイミング？
NO
YES
A5
ユーザの現時刻の状況を元に、嗜好に合うスポット情報を抽出
A6
スポット情報をユーザの携帯情報端末へ送信

[Drawing 7]


開始
A10
嗜好学習
タイミング？
NO
YES
A11
ユーザの行動パターンより、
ユーザの滞在スポットを認定
A12
スポットの情報を検索
A13
該当ユーザの嗜好情報を検索
A14
スポット情報の属性情報により、
該当ユーザの嗜好情報を作成／更新
A15
ユーザの嗜好情報を格納・更新

[Drawing 8]


開始
A20
集団嗜好学習
タイミング？
NO
YES
A21
ユーザ集団の嗜好情報をロード
A22
ユーザ集団の学習
A23
集団ごとに嗜好情報を
集団嗜好情報DBへ格納／更新
A24
情報提供者ごとに、対象集団を選択し、
対象集団の嗜好情報を検索
A25
情報提供者へ対象となる集団
の嗜好情報を送信

[Translation done.]

PROGRAM DISTRIBUTION SYSTEM

Publication number:	JP2003032710
Publication date:	2003-01-31
Inventor:	AKIHO MASATSUGU; FUJIMAKI JUNICHI; INAGAKI JUN
Applicant:	ASUNETTO JAPAN KK
Classification:	
- international:	***G06F13/00; H04H9/00; H04N7/173; H04N17/00;*** **G06F13/00; H04H9/00; H04N7/173; H04N17/00;** (IPC1-7): H04N17/00; G06F13/00; H04H9/00; H04N7/173
- European:	
Application number:	JP20010212529 20010712
Priority number(s):	JP20010212529 20010712

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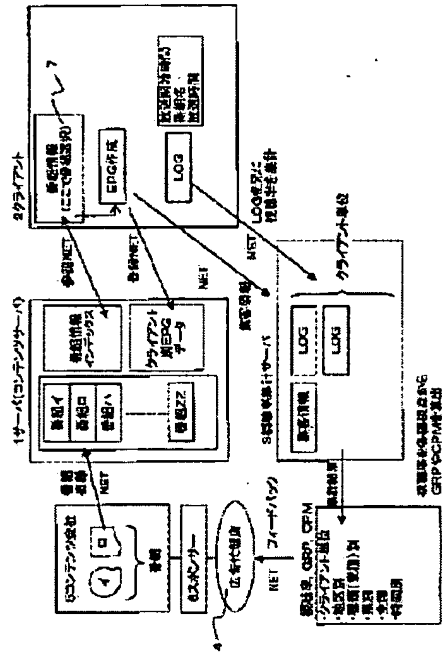
Abstract of **JP2003032710**

PROBLEM TO BE SOLVED: To distribute a program selected by clients to displays in clients' equipment to know the audience rating of the broadcast program in actual number. SOLUTION: Clients 2, a content server 1 and an audience rating server 3 are connected over an internet line NET. The clients 2 are specified public equipment e.g. hospitals. The content server 1 distributes a program to the hospitals 2 which then telecast the program on displays 7 in waiting rooms. The audience rating server 3 receives distributed program information about the program telecast in the hospital 2 and collected audience information about visitors (patients) to the hospitals, totals the distributed program information and collected audience information per hospital, calculates the audience rating of the telecast program in each hospital as program information, and feeds the calculation result back to sponsors 6 being program providers as audience rating information.



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